

IN THE CLAIMS

This is a complete and current listing of the claims, marked with status identifiers in parentheses. The following listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) ~~A method for the production of a can body (24'), by which method with a closed can shell (24) having a welding seam (11a), that extends over the entire height of the can shell (24), is provided, and at least one a closure member (31b, 32, 31a) is arranged on the can shell (24), characterized in that comprising:~~

~~forming a metal strip to a tube (11) closed in peripheral direction is formed by a forming step and ; a welding step, starting from a metal strip(1), said tube optionally consisting of sections (112) which join immediately each other, that a~~

~~laser welding a longitudinal seam in between lateral edges of the tube shaped metal strip (11a, 124) is welded substantially continuously in longitudinal direction of the tube in the welding step;~~

~~severing tube sections and that tube sections of the obtained tube (11), which have the length of a desired can height;~~

~~forming the sections to , are further treated as can shells (24) with a cross-sectional restriction at least at one face of the can shells; and~~

~~attaching a closure member in the form of a can bottom to said at least one restriction of each can shell by laser welding a circumferential seam, wherein the outer marginal region of the can bottom is adapted to the shape of said restriction.~~

2. (Currently Amended) Method according to claim 1,
~~characterized in that, wherein at least one of the~~
~~following characteristics is provided~~

a) ~~the longitudinal welding seam (11a, 124) is formed~~
~~welded on a flat pressed tube while the lateral marginal~~
~~regions to be interconnected are supported on the inner~~
~~side of the can shell. (11),~~

b) ~~the arising tube (11) is pressed flat, and tube~~
~~sections are severed from the flat pressed tube (11),~~

c) ~~the welding seam (11a, 124) is formed by laser~~
~~welding, and~~

d) ~~the welding seam (11a, 124) is formed as a butt joint~~
~~or a jump joint.~~

3. (Currently Amended) Method according to claim 1 or 2,
~~characterized in that, wherein~~ for forming the tube (11),
~~the metal strip (1) is moved in its longitudinal direction~~
~~through a forming device (13) and is passed next to a~~
~~welding device (37), the forming device (13) forming the~~
~~metal strip (1) continuously in such a way that the two~~
~~lateral edges (1a, 1b) contact each other, and the welding~~
~~device (37) interconnects these lateral edges (1a, 1b) by~~
~~said a longitudinal welding seam (11a).~~

4. (Currently Amended) Method for the production of a can
body with a closed can shell having a longitudinal welding
seam extending over the entire height of the can shell and
with at least one closure member arranged on the can
shell, comprising: Method according to claim 1 or 2,
characterized in that, for forming a tube (11) which
consists of the directly joining sections (112),
cutting the a metal strip (1) is cut into sections
(110), the sections (110), prior to laser welding, are
forminged the sections into a closed flat pressed
shape by means of a forming mold (120) and forming tools

~~(121, 122),~~

~~putting the flat pressed sections in series (112),~~
~~joining directly each other are put into series,~~

~~laser welding a longitudinal seam in between lateral~~
~~edges of the joining, flat pressed sections substantially~~
~~continuously in longitudinal direction and the welding~~
~~seam is formed over along the joining, flat pressed~~
~~sections (112),~~

~~severing tube sections, which have the length of a~~
~~desired can height;~~

~~forming the sections to can shells with a cross-~~
~~sectional restriction at least at one face of the can~~
~~shells; and~~

~~attaching a closure member in the form of a can~~
~~bottom to said at least one restriction of each can shell~~
~~by laser welding a circumferential seam, wherein the outer~~
~~marginal region of the can bottom is adapted to the shape~~
~~of said restriction.~~

5. (Currently Amended) Method according to ~~any of~~ claims 1-~~to~~
~~4, characterized in that, wherein~~ a decorative film ~~(17')~~
is applied to the outer side of the metal strip ~~(1)~~ after,
~~or optionally prior to, forming and welding, preferably by~~
~~feeding a film strip (17).~~

6. (Currently Amended) Method according to ~~any of~~ claims 1-~~to~~
~~5, characterized in that, wherein~~ a first film strip ~~(5)~~
is put on the flat metal strip ~~(1)~~ in longitudinal
direction of the metal strip ~~(1)~~, and is fixed ~~my means by~~
~~way of a sealing connection to form an inner protective~~
~~layer (5'), a seam covering tape (8) is optionally put on~~
~~the film strip (5) and made to engage the region of the~~
~~welding seam (11a) after the welding step.~~

7. (Currently Amended) Method according to any of claims 1 to 6, ~~characterized in that, wherein~~ for severing tube sections, a cutting procedure is carried out with a cutting edge (25), the cutting edge (25), during the cutting procedure, being optionally moved together with the arising tube (11) and being reset after having severed a tube section, but being preferably stationary placed, while the tube (11) during fixation by the cutting edge (25) is enabled to bend in a bending region to absorb the retained advance as a bending elongation in the bending region.

8. (Currently Amended) Method according to claim 7, ~~characterized in that, wherein~~ on the flat metal strip (1) incisions (118e) are formed which after forming and pressing flat are arranged in curved regions (112c) between flat regions (112b, 112d), the cutting procedure being carried out in the flat regions (112b, 112d) between the incisions (118e).

9. (Currently Amended) Method according to any of claims 1 to 8, ~~characterized in that, wherein~~ can shells (24) are shaped by a shell forming device (28, 29) in such a way that a circular cylindrical cross-section is obtained, an enlarging step being optionally carried out which increases the circumference of the can shell (24) and, in particular, creating a cross sectional restriction from the enlarged one to a smaller cross section at one can end (24b), preferably at the lower one, the cross sectional restriction (24c) being optionally formed with a radius of curvature which corresponds to a current shape of aerosol cans at the transition from the can's wall to the can bottom (31b).

10. (Currently Amended) Method according to any of claims 9 to 8, ~~characterized in that~~, wherein at least one face side of a circular cylindrical can shell (24) an annular buckle (60) is formed radially outwards, the can shell (24) comprising a cross-sectional restriction towards the face side at the buckle (60).

11. (Currently Amended) Method according to any of claims 1 to 10, wherein said at least one restriction is a shoulder-shaped restriction. ~~characterized in that~~, a can bottom (31b) is connected at a lower face side (24b) of the can shell (24) tightly to the can shell (24) by circumferential welding, the can bottom (31b) being made to engage the restriction (24c) of the can shell (24), and a welding connection being formed in this position.

12. (Currently Amended) Method according to any of claims 1 to 11, ~~characterized in that~~, wherein a cross-sectional restriction is formed at least one necking step is carried out at an upper face side (24a) of the can shell (24), and a valve seat being optionally formed after necking, but that preferably a closure member (31a) including the valve seat is tightly connected to the restriction at the upper face side of the can shell (24) at the upper, necked end, optionally by means of a folded seam connection, but preferably by a welding connection, particularly by a laser welding a circumferential seam, wherein the outer marginal region of the closure member is adapted to the shape of said restriction connection.

13. (Currently Amended) Method according to claim 12, ~~characterized in that~~, wherein in the at least one necking step, the can body (24') to be necked is held in two regions, the can body (24'), in a first region, being held by a first holder (45) so that it may be rotated

about its longitudinal axis ~~(24d)~~ by the first holder ~~(45)~~, while the second region is situated at the can end to be necked where the can body ~~(24')~~ is held by a co-rotating second holder, which comprises a support part ~~(46)~~ displaceable relative to the can body, having an annular deflection edge ~~(46a)~~, wherein forming is achieved by at least one deforming surface ~~(47a)~~ joining the deflection edge ~~(46a)~~ at a distance ~~(a)~~ in axial direction and being adapted to be pressed towards the interior in radial direction, a free space ~~(48)~~ being provided radial inside the deforming surface ~~(47a)~~ in the interior of the can so that nothing obstructs a deformation of the can shell ~~(24)~~ towards the interior.

14. (Currently Amended) Method according to claim 120, ~~characterized in that, wherein~~ an annular buckle ~~(60)~~ is formed at each of the two face sides ~~(24a, 24b)~~ of the can shell ~~(24)~~ in radial outward direction, while the can shell ~~(24)~~ comprises a cross-sectional restriction at the buckles ~~(60)~~ towards the respective face side ~~(24a, 24b)~~, and that at the restrictions the can bottom ~~(31b)~~ and the upper closure member are attached by laser welding~~welded to one face side (24b) and an upper closure member (31a)~~ is welded to the other face side ~~(24a)~~.
15. (Currently Amended) Method according to any of claims 1 to 14, ~~characterized in that, wherein~~ a base covering ~~(55)~~ is fixed in such a manner that the connection of the can shell ~~(24)~~ to the can bottom ~~(31b)~~ is covered by it.
16. (Currently Amended) A method for fixing a valve to a can shell (24) which, preferably, is produced by a method according to any of claims 1 to 15, characterized by according to claim 1, wherein welding step in which an

upper closure member (31a) together with a valve (62) is fastened attached to the can shell (24) by laser welding.

17. (Currently Amended) A method according to claim 1, further comprising for necking an open face side (24a) of a can body (24'), characterized by at least one necking step, wherein a can body (24') to be necked, which extends along an axis (24d), is held in two regions, the can body (24') being firmly held by a first holder (45) in the first region so that it may be rotated about its longitudinal axis (24d) by the first holder (45), while the second region is situated at the can end to be necked where the can body (24') is held by a co-rotating second holder, which comprises a support part (46) displaceable relative to the can body, having an annular deflection edge (46a), and a deformation is achieved by at least one forming surface (47a) joining the deflection edge (46a) at a distance (a) in axial direction and being adapted to be pressed towards the interior in radial direction, a free space (48) being provided radial inside the deforming surface (47a) in the interior of the can so that nothing obstructs a deformation of the can shell (24) towards the interior.

18. (Currently Amended) Device for the production of a can body (24') with a closed can shell and at least one closure member arranged on the can shell, comprising: means for tightly connecting a can shell closed by a welding seam (11a, 124) to a closure member (31b, 32, 31a) to be fixed to the can shell (24) at the face side, characterized in that the device comprises a supply arrangement for supplying a metal strip; (19) at least one a first forming device (13) for forming the metal strip (1) into the shape of a closed tube (11) closed in peripheral direction;

~~optionally consisting of sections immediately joining each other (112), a welding device (37) for substantially continuously welding the shaped tube (11);~~

~~and a severing device (25), which enables separating closed can shells (24) from the tube; (11)~~

a second forming device for forming the sections to can shells with a cross-sectional restriction at least at one face of the can shells; and

an attaching device for attaching a closure member in the form of a can bottom to said at least one restriction of each can shell by laser welding a circumferential seam, wherein the outer marginal region of the can bottom is adapted to the shape of said restriction.

19. (Currently Amended) Device according to claim 18, ~~characterized in that~~ wherein the first forming device (37) forms the metal strip (1) continuously around an axis extending parallel to the metal strip (1) in such a manner that the two lateral edges (1a, 1b) contact each other, and that the welding device (37) connects these lateral edges (1a, 1b) by a longitudinal welding seam (11a), and that the severing device (25) comprises preferably a cutting edge (25) that is optionally moved during the cutting procedure together with the arising tube (11) and is reset after having severed a tube section, or is, in particular, stationary, while the tube is enabled to bend to absorb the retained advance as a bending elongation in the bending region.

20. (Currently Amended) Device according to claim 18, ~~characterized in that~~ wherein the welding device (37) is formed and arranged in such a way that it enables welding of a butt-joint or a jump joint ~~the welding seam (11a, 124)~~ on a flat pressed tube while the lateral marginal

regions to be interconnected are supported on the inner side of the can shell (11), optionally consisting of flat pressed sections immediately joining each other (112).

21. (Currently Amended) A can body (24') comprising including a can shell, (24) closed by means way of a longitudinal laser welding seam, (11a) to which a and a closure member bottom (31b, 32, 31a) is fixed at the one face side of the can shell, characterized in that wherein

the can shell consists of metal strip closed in peripheral direction by the longitudinal laser welding seam;

the can shell has a cross-sectional restriction at least at one face of the can shell; and

a closure member in the form of a can bottom is attached to said at least one restriction of each can shell by a circumferential laser welding seam, wherein the outer marginal region of the can bottom is adapted to the shape of said restriction.

the can body (24') is produced by a method according to any of claims 1 to 16.

22. (Currently Amended) A can body (24') comprising a closed can shell (24) to which and a closure member (31a) fixed at one face side of the can shell wherein

the can shell has a cross-sectional restriction at least at one face of the can shell;

the closure member is attached to said at least one restriction of the can shell by a circumferential laser welding seam, wherein the outer marginal region of the closure member is adapted to the shape of said restriction; and

the closure member including a valve seat (50) is fixed at the face side, characterized in that with the closure member (31a) is connected to the can shell (24) by

~~a welding seam (42) and comprises a metallic inner portion (51) as well as a plastic portion (52) which surrounds torically the metallic inner portion (51) at least at the valve seat (50).~~

23. (Currently Amended) ~~A can body (24) comprising a closed can shell (24) to and which an upper closure member (31a) including a valve is fixed at the one face side of the can shell wherein~~
~~the upper closure member is including a valve;~~
~~the can shell has a cross-sectional restriction at least at one face of the can shell; and~~
~~the closure member with the valve is attached to said at least one restriction of the can shell by a circumferential laser welding seam, wherein the outer marginal region of the closure member is adapted to the shape of said restriction, characterized in that the upper closure member (31a) is connected to the can shell (24) by a welding seam (42).~~
24. (New) Can body according to claim 21, wherein the face side of the can shell and the face side of the bottom attached at said face of the can shell are on opposite sides of the can body, one inside and one outside of the can.
25. (New) Can body according to claim 21, wherein the can shell has a cross-sectional restriction at both faces, further comprising a upper closure member at the upper face opposite to the bottom, wherein the upper closure member is connected to the restriction at the upper face of the can shell by a circumferential laser welding seam, and the outer marginal region of the upper closure member is adapted to the shape of said upper restriction.

26. (New) Can body according to claim 25, wherein the face side of the can shell and the face side of the upper closure member attached at said face of the can shell are on opposite sides of the can body, one inside and one outside of the can.
27. (New) Method according to claim 1, wherein the longitudinal welding seam is formed as a butt-joint or a jump joint.
28. (New) Method according to claim 1, wherein for attaching the bottom to the can shell, the face side of the bottom and the face side of the can shell at the bottom are on opposite sides of the can body, one inside and one outside of the can.
29. (New) Method according to claim 6, wherein a seam covering tape is put on the film strip and made to engage the region of the welding seam after the welding step.
30. (New) Method according to claim 9, wherein forming the can shell includes increasing the circumference of the can shell and creating a cross-sectional restriction from the enlarged one to a smaller cross-section at one can end.
31. (New) Method according to claim 12, wherein for attaching the upper closure member to the can shell, the face side of the upper closure member and the face side of the can shell at the upper closure member are on opposite sides of the can body, one inside and one outside of the can.
32. (New) Device according to claim 18, wherein said attaching device brings together the bottom and the can shell in such a way, that the face side of the bottom and the face

side of the can shell at said bottom are on opposite sides of the can body, one inside and one outside of the can.

33. (New) Device according to claim 18, wherein said second forming device for forming the sections to can shells is forming cross-sectional restrictions at both faces of the can shells and said attaching device is attaching an upper closure member at the can shell by laser welding a circumferential seam, wherein the outer marginal region of the upper closure member is adapted to the shape of the restriction at the upper can shell end, and the face side of the upper closure member and the face side of the can shell at said upper closure member are on opposite sides of the can body, one inside and one outside of the can.